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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/595,391	02/01/2007	Bernd Dollgast	078857.0172	8571
31625 7590 09/23/2008 BAKER BOTTS L.L.P. PATENT DEPARTMENT 98 SAN JACINTO BLVD., SUITE 1500 AUSTIN, TX 78701-4039				
EXAMINER GORDON, BRYAN P				
ART UNIT 2834		PAPER NUMBER		
MAIL DATE 09/23/2008		DELIVERY MODE PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/595,391

**Applicant(s)**

DOLLGAST ET AL.

**Examiner**

BRYAN P. GORDON

**Art Unit**

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 June 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-946)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

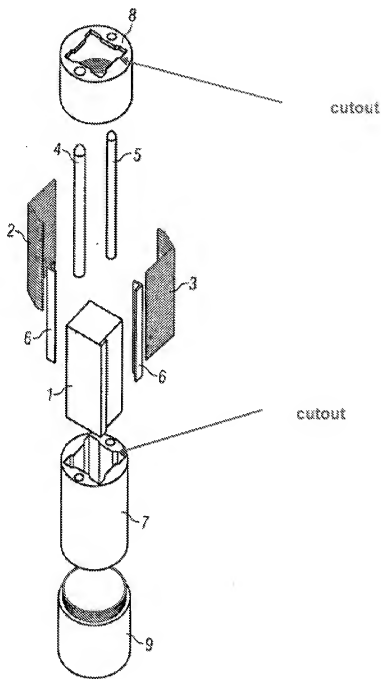
1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1-2, 4-5 and 8-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fitzner (DE19715487) and in view of Mohr (WO 2004004021).
6. Considering claim 1, Fitzner (Figure 3) teaches a piezo actuator for actuating an injector for an injection system of an internal combustion engine (paragraph 2), comprising a holder for spatially fixing a piezo stack (1) and two associated connection pins (3) for electrical contacting of the piezo stack.

However, Fitzner does not teach a top plate, a bottom plate, and a first rib and a second rib, wherein the first and second rib couple said top and bottom plate to form said holder, the top plate and the bottom plate each comprises cutouts to receive a single piezo stack and wherein holder is furthermore designed to receive two associated connection pins.



**Figure 1**

In the same field of endeavor, Mohr (Figure 1) teaches a top plate, a bottom plate, and a first rib (6) and a second rib (6), wherein the first and second rib couple said

top and bottom plate to form said holder, the top plate and the bottom plate each comprises cutouts to receive a single piezo stack and wherein holder is furthermore designed to receive two associated connection pins for the benefit of making a piezo actuator which exhibits a simple and a costing favorable structure.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include to include a top plate, a bottom plate, and a first rib (6) and a second rib (6), wherein the first and second rib couple said top and bottom plate to form said holder, the top plate and the bottom plate each comprises cutouts to receive a single piezo stack and wherein holder is furthermore designed to receive two associated connection pins with Fitzner device's for the benefit described above.

7. Considering claim 2, Mohr teaches a first rib and the second rib are formed such that each protects axially running edge of the piezo stack as described above in claim 1.
8. Considering claim 4, Mohr (Figure 1) teaches the edge protecting ribs covers two axially running, opposite edges of the piezo stack.
9. Considering claim 5, Fitzner teaches wherein between the edge guard and the piezo stack there is a gap large enough to allow a potting compound to penetrate during encapsulation (paragraph 15).
10. Considering claim 8, Fitzner teaches wherein the connection pins are fixed in the holder in a form-fit and/or force-fit manner (paragraph 14).
11. Considering claim 9, Fitzner (Figure 5) teaches wherein the connection pins (3) are extrusion-coated or molded (8) in with the material of the holder.

12. Considering claim 10, Fitzner teaches wherein the holder essentially consists of plastic (paragraph 15).
13. Considering claim 11, Fitzner (Figure 5) teaches wherein the two connection pins are fixed in the holder in two radial bearings (2), respectively.
14. Fitzner (Figure 1) teaches the two connection pins are axially fixed in the holder in a thrust bearing (2) in each case.
15. Considering claim 13, Mohr (Figure 1) teaches wherein the cutout in the first end plate is larger than the cross-sectional area of the piezo stack in order to allow the penetration of potting compound (paragraph 2).
16. Considering claim 14, Mohr (Figure 1) teaches where in the cutout in the second end plate is larger than the cross-sectional area of the piezo stack in order to allow the penetration of potting compound (paragraph 2).
17. Considering claim 15, Fitzner teaches wherein the holder with the inserted piezo stack and the inserted connection pins is encapsulated with a potting compound (paragraph 14).
18. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fitzner (DE19715487), in view of Mohr (WO 2004004021) and in view of Pape (US PN 4,778,358).
19. Considering claim 3, Fitzner in view of Mohr teaches the claimed invention as described above except for the bottom plate has clamps for receiving said connection pins.

In the same field of endeavor, Pape teaches clamps for receiving said connection pins (col. 1 lines 5-15). It would be obvious to one of ordinary skill in the art to use a clamp to secure connection pins to the bottom plate for the benefit of make sure the pins to not fall out when piezo actuator is in use.

***Response to Arguments***

20. Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection. Regarding the applicant claims about 6 of Mohr being insulating foil, the applicant describes the ribs which served as guards along the piezo stack. The examiner interprets 6 in Mohr as guards that protect the piezo stack which meets the limitation of the applicant's invention.

***Conclusion***

21. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

22. A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of



the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

23. Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRYAN P. GORDON whose telephone number is (571)272-5394. The examiner can normally be reached on Monday-Thursday 8:00-5:30, Friday 7:30-4:00.

24. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on 571-272-2044. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

25. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/B. P. G./  
Examiner, Art Unit 2834  
/Bryan P Gordon/  
Examiner, Art Unit 2834

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/Darren Schuberg/

Supervisory Patent Examiner, Art Unit 2834